

PROCEEDINGS OF THE BROWN COUNTY
LAND CONSERVATION SUBCOMMITTEE

Pursuant to Section 18.94 Wis. Stats., a regular meeting of the **Brown County Land Conservation Subcommittee** was held on Monday, July 22, 2013 in Room 161, UW Extension, 1150 Bellevue Street

Present: Chair Norb Dantinne, Supervisors Bernie Erickson, Tom Sieber, and Dave Landwehr
Excused: Supervisor Dave Kaster
Also Present: Executive Streckenbach, Jim Jolly, and other interested parties

I. Call Meeting to Order

The meeting was called to order by Chairman Norb Dantienne at 6:30 p.m.

II. Approve/Modify Agenda.

Motion made by Supervisor Bernie Erickson, seconded by Supervisor Tom Landwehr to approve. Vote taken. MOTION CARRIED UNANIMOUSLY.

III. Approve/modify minutes of Land Conversation Subcommittee of June 24, 2013.

Motion made by Supervisor Erickson, seconded by Supervisor Dave Landwehr to approve. Vote taken. MOTION CARRIED UNANIMOUSLY.

Comments from the Public: NONE

1. Budget Status Financial Report for May, 2013.

Land & Water Conservation Director Jim Jolly reported that they are tracking at the same percentage as last year, which is good.

Narrative Justification:

"The employee charged to Land and Water Conservation's Baird Creek grant was receiving benefits during the original grant award period as approved by the Federal funding agency. The continuation of benefit eligibility was approved by human resources to coincide with the extension of the grant award period. This budget adjustment request is to reallocate expenses for the benefits funded by the Baird Creek grant award."

Motion made by Supervisor Erickson, seconded by Supervisor Landwehr to receive and place on file. Vote taken. MOTION CARRIED UNANIMOUSLY.

2. Budget Adjustment Request (13-60): Reallocation of personnel services and fringe benefits to another major budget classification except contracted services, or reallocation to personnel services and fringe benefits from another major budget classification except contracted services.

Jolly shared this topic was basically to extend the Baird Creek grant for one more year, a fully funded position that the County has nothing into. This would approve benefits that will go along with the position before the extension happens.

Landwehr question where the money would go otherwise; to landowner payments for easement rights? Jolly answered that the payments are for buffers, and they have more money than they need in their account right now, and that the project ends at the end of this year.

Motion made by Supervisor Sieber, seconded by Supervisor Landwehr to approve. Vote taken. MOTION CARRIED UNANIMOUSLY.

3. Director's Report.

Jolly handed out a proposal documents (attached), *Great Lakes Demonstration Farm Network*. This proposal will prove adaptive management is a fiscally possible alternative to industry in their high cost of implementation for getting the reductions they need. This proposal will demonstrate a number of conservation practices and other innovative technologies functioning on two to four dairy and cash crop farms; two in Brown County, two in Outagamie, all led by Brown County. The purpose of the proposal is to ramp up the conservation efforts on these acres until they hit the spot to get to the reduction they need. Anywhere from 50-60% reduction is what they are shooting for. There is a large network of partnerships who are involved listed on page 3 of the proposal. It will be a five year deal, and they will begin negotiating within the CS and with the Great Lakes commissions on August 8. Jolly also shared a new initiative for the upcoming budget, there will be a staff position that NRCS is willing to pay 75% of.

Erickson asked if the landowners will have to put dollars down if the demonstration farm needs money. Jolly said the proposal is to pay 100% of the cost. NRCS will pay 75% and Great Lakes will pick up the rest, and if they don't pick up the rest, the Soil and Water Resource Management grant will pick up the rest.

Dantienne and Landwehr asked questions about how the selection is determined in regards to the demonstration farms. Jolly shared that the program will be only 12,000 acres; the program will work if cost per pound to get phosphorous goes down, say under \$100,000 vs. the \$500,000, then the probability to move forward with a big program will work is likely. If it doesn't within the 3-5 years, then at least they will know that. Farms are chosen accordingly to capture the needed data and production. NRCS, Great Lakes, Jolly's team, and others will come up with a plan, so that it is replicable after it is done, monitored by USGS with a Cadillac monitoring system to record excellent data to find out how much run-off and how many pounds of phosphorous are in these fields.

Discussed by the committee was a possible future planned tour of these farms and their demonstrations.

To conclude to his report, Jolly shared they are currently in negotiation within the CS for an Engineering Tech position for a 3 year term at 75% funded position, and if worked out right they could get the 75% raised by having them pay for the computers, rent, etc.. At the moment, this looks hopeful.

Motion made by Supervisor Landwehr, seconded by Supervisor Sieber to receive and place on file. Vote taken. MOTION CARRIED UNANIMOUSLY.

4. Such other matters as authorized by law. None

5. Adjourn.

Motion made by Supervisor Sieber, seconded by Supervisor Erickson to adjourn at 6:42 p.m. Vote taken. MOTION CARRIED UNANIMOUSLY.

Respectfully submitted,

Blair Xiong
Recording Secretary

Great Lakes Demonstration Farm Network

Lower Fox Watershed, Wisconsin

Background

There is a need for more and better information on the effectiveness of current conservation systems used to reduce nonpoint source pollution, especially in the critical watersheds of the Great Lakes basin such as Western Lake Erie, Saginaw and Fox Rivers. The Great Lakes basin has unique geology, climates, topography and soils that provide challenges to controlling erosion and nonpoint source pollution that are not found in other parts of the country. Most of the cropland in these critical areas was former lakebeds and wetlands. The soils have high clay content; the topography is level to gently sloping and interlaced with man-made drainage channels and subsurface drains. They are also intensively farmed. This uniqueness has often resulted in conservation practice systems not always functioning in a predictable manner as elsewhere in the country.

The network will conduct demonstrations of the effectiveness and adaptability of conservation practice systems to reduce erosion and sedimentation and nonpoint source pollution and provide educational/technology transfer opportunities for the public, farmers, land managers, agribusiness, environmental and natural resource agencies and research entities and their partners. To initiate this network, the Great Lakes Commission (GLC) and its partners will establish the first Great Lakes Demonstration Farm Network in the Lower Fox Watershed. The Lower Fox demonstration area will aid in the evaluation of the physical, chemical, biological, economic and social impacts of agriculture and other human activities on nonpoint source pollution control within the lower Fox River/Green Bay, Lake Michigan.

With the recent approval of the Lower Fox River/Lower Green Bay TMDL watershed and pending implementation plan, conservation program planning, and implementation efforts through various agencies within the basin have begun to ramp up. NRCS has allocated over 3 million dollars and has achieved significant progress planning and implementing conservation practices within the designated GLRI area within the basin. Brown and Outagamie County Land and Water Conservation Departments have also made significant contributions through accelerated implementation of the State's Working Lands Initiative Program and by recently signing contribution agreements with NRCS to assist them in their program activities. The goal of all these efforts is to reduce nutrient and sediment loading to the Lower Fox River and ultimately the bay of Green Bay. The TMDL will place substantial burdens on point source dischargers by ratcheting down their phosphorus and TSS load allocations to the system. Their primary options to address these reductions include either upgrading existing infrastructure (a high cost but definitive option) or to work with the agricultural producers in the upstream watershed to lower overall P and TSS levels through water quality trading and/or adaptive management (a lower cost, yet potentially non-definitive option). If the latter lower cost options are to be chosen, diverse partnerships will be critical to successful outcomes.

Project Purpose

The purpose of this project is to establish a network of demonstration farms within the Lower Fox Watershed to demonstrate to farmers and the general public that the right combination of traditional conservation practices and other innovative technologies functioning on the landscape can produce viable and sustainable economic and environmental benefits.

Project Objective

The objectives of the proposed project are to:

- Establish between two to four demonstration farms in critical geographic areas within the Lower Fox Watershed to test the effectiveness of current and innovative conservation systems as they pertain to nonpoint pollution control including meeting local TMDL and providing phosphorus and sediment reduction credits for trading.
- Establish an efficient and effective mechanism to provide for the transfer of technology and information on the effectiveness of conservation systems to the end-users, land management agencies, agribusiness and the public.
- Create opportunities for others including resource, environmental and research agencies and agribusiness to test their research, technical assistance and program implementation at the demonstration farms.
- Create and implement an information/outreach strategy to share information and lessons learned from the Lower Fox Watershed to other managers, researchers and stakeholders throughout the Great Lakes basin.

Demonstration Farm Size

Size of the demonstration farms will depend on the soils, topography, farming practices and the support of the local community but it is estimated that each site will be approximately 250 to 300 acres in size. If possible, participating sites will be grouped within common twelve digit HUCs within Brown and Outagamie counties.

Demonstration Farm Selection

Several factors will be utilized to farm selection including:

- Farmer enthusiasm/progressiveness – this projects success will be predicated upon securing the cooperation of highly motivated and progressive minded farm operators who will be willing to open up their operation to the scrutiny of several government agencies. The participating farmer will be asked to install practices above and beyond the norm for the benefit of all future participants. They will also be expected to the public sharing of the results of any monitoring efforts.

- Monitoring – the participating farmer will be required to allow USGS edge of field monitoring data to be gathered to quantify load reductions.
- Soil types/topography – farms selected will have soils and topography that are typical of agriculture in the county. Of special interest will be fine textured soils on moderate slopes of 3 – 6%.
- Dairy farms and cash crop farms – it will be important to work with both types of operations so analysis can be done on the economics for each operation type.
- Landowner willingness to open their financial records – if water quality trading is going to be verified as a viable option for the point source dischargers in the system, some form of financial records will need to be analyzed. These parameters will need to be clarified by the GLC based upon the requirements of their feasibility study.
- Landowner willingness to host on farm demonstrations, tours, etc. – one of the goals of this project proposal is to showcase various conservation practices that are needed to produce verifiable reductions in P and TSS. These practices need to be “demonstrated” to other farmers, agency staff etc.

Project Duration

A project duration up to 5 years in length is desired. A project duration of a minimum of 3 years could be considered if funding sources were limited; however conservation practice establishment and monitoring data would be significantly compressed and create limitations when compared to a 5 year project duration.

Partnerships

A diverse set of federal, state and local partners will participate in this project including but not limited to:

- Brown County Land & Water Conservation Department
- Great Lakes Commission
- NEW Water (formerly Green Bay Metropolitan Sewerage District)
- Outagamie County Land Conservation Department
- University of Wisconsin – Green Bay
- University of Wisconsin – Madison
- USDA Natural Resources Conservation Service
- U.S. Geological Service
- UW-Extension
- Wisconsin Department of Agriculture, Trade, and Consumer Protection
- Wisconsin Department of Natural Resources

Project Administration

The GLC as project administrator will:

- Designate a local steering/advisory committee to provide guidance to the GLC on the implementation and operation of the selected sites.
- Develop the criteria for the demonstration areas taking into consideration; landowner willingness to participate, soil types, topography, crops grown and current farming practices.
- Contract with local sponsor(s) (e.g., Brown and Outagamie County LCDs) to be local project liaisons (duties that include site administer and technology transfer).
- Contract for site use with landowners/farmers to install demonstration conservation systems (mainly at the field-scale level), monitoring, track farm inputs and outputs including nutrient levels, annual application rates and methods and timing of application and for controlled public access.
- Develop the outreach and technology transfer program.
- Obtain a commitment from other partners for additional resources and funds.

Project Strategies

- Economics. In order for this project to be successful, it is recommended that 100% of landowner costs for installing needed conservation practices will be provided through several funding sources. NRCS will provide the majority (75%) for all standard conservation practices installed. The remaining 25% will be paid through various grants and funding agencies such as DATCP SWRM funding, NEW Water etc. Incentive payments will also be needed for some upland “soft” practices because they may initially be an inconvenience for the farm operation. It is desired that all unique/non-standard practices and innovative technologies will also be paid at 100% through funding sources such as NEW Water, others. This however is fully dependent on their buy in to this demonstration farm concept.
- Education and Information. These efforts will be a key component of this proposal. A select group of landowners from the chosen sub-watershed will be invited to the initial meeting. Representatives from NRCS, Brown and Outagamie Counties, GLC, USGS, UW Extension, others will share the vision as well as the scope of the project. Once the project farm(s) are selected, project staff will work ongoing throughout the course of the project to conduct field trials, test plots and on farm demonstrations and frequent tours/field days. Every practice installed will be published describing its purpose and overall value in preventing P and TSS runoff.
- Technical Assistance. One project staff position will be hired who will be solely dedicated to the success of this project and responsible for being the primary point of contact for the landowner as well as for all partnering agencies/groups. This staff person will be responsible for coordinating the initial inventory of the farms, drafting the proposed implementation plan, coordinating all survey design and implementation scheduling, obtaining all necessary permits, working with all other customers such as private agronomists, implement dealers, commercial manure haulers etc. This staff person will also be responsible for all reporting provisions outlined by the various funding agencies.

- **Tracking and Monitoring Success.** Success will be measured through edge of field monitoring as by USGS with possible assistance from UW Green Bay staff. It would be preferred that SWAT modeling (calibration purposes - UWGB) be done in conjunction with the actual edge of field monitoring so other watersheds targeted for implementation could be modeled prior to future implementation efforts. Due to the high costs of monitoring, only two edge of field monitoring station will be established on one of the selected he farms immediately after site selection to set a baseline for the study. The monitoring equipment will measure one edge of field site as well as one tile outlet (can be a significant source of dissolved P).
- **Project Replication.** The ability of these projects final outcomes to be reproducible throughout the entire Lower Fox River Basin will be of utmost importance. Whether the suite of practices utilized attenuate enough P and TSS to satisfy the TMDL goals will be the major question that must be answered.

Project Implementation

The GLC will, in consultation with NRCS and a project steering committee will select the demonstration farm/site areas and formulate the site work plans by:

- Selecting and contracting with landowners to establish four demonstration sites.
- Establishing the current base line site conditions including physical data on, among others, soils, nutrient levels, topography, water quality, rainfall and runoff amounts, farming practices, crop histories for each site.
- Gathering social and economic data for the site watersheds.
- Selecting the conservation systems to be installed in each site, including nutrient management, runoff and drainage management, erosion and sediment control and nonpoint source pollution control. A special TMDL conservation system demonstration will be conducted at two of the sites, one in Brown County and one in Outagamie County, to evaluate total phosphorus and total suspended solids reductions at a lower cost through a trading program for point sources to satisfying their discharge permits.
- Developing an implementation timeline and resource needs assessment to plan, design and install the selected conservation systems.
- Develop and implement a program to practically improve soil health on high-clay-content glacial till soils.
- Develop a conservation system monitoring program.

Project Outreach

The GLC will, in consultation with the NRCS and the steering committee, develop a technology transfer/outreach work plan including publicity, on-site tours, website, and other forms of information sharing outlets. In addition, a regional outreach effort will be planned and undertaken to inform managers, researchers, policymakers and other stakeholders of the results of the conservation system demonstrations. The types of activities include making presentations at regional and national natural resource workshops and seminars, e-news, webinars, and briefings at Commission meetings and others.

Estimated Project Budget

Budget Item	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Project Manager (<i>salary/benefits</i>)	82,000	82,000	82,000	82,000	82,000	410,000
Project Manager (<i>staff support expenses – ex. travel, computer, etc</i>)	5,000	5,000	5,000	5,000	5,000	25,000
Site Rental Cost (<i>\$20 per acre per year</i>)	24,000	24,000	24,000	24,000	24,000	120,000
Site Maintenance (<i>signage, supplies, clean-up, etc</i>)	5,000	5,000	5,000	5,000	5,000	25,000
New/Innovative Conservation Practice Technology Implementation (<i>ex. gypsum, polyacrylamide treatment, etc</i>)	25,000	25,000	25,000			75,000
Technology Transfer (<i>on-site – tours, etc</i>)	7,000	7,000	7,000	7,000	7,000	35,000
Technology Transfer (<i>regional – display material, website, etc</i>)	7,000	7,000	7,000	7,000	7,000	35,000
Soil Testing (<i>project years 1, 3 & 5; GPS grid samples</i>)	3,000		3,000		3,000	9,000
Tile Mapping	1,000					1,000
Critical Slope Treatment (<i>purchase row cropping rights \$5000/acre</i>)	25,000					25,000
Critical Slope Treatment (<i>conversion to long term hay in rotation with row crop once/5years, lime if needed - \$750/acre</i>)	15,000					15,000
Soil Health Incentive (<i>\$400/acre - incentive paid for improvement in soil organic matter increase</i>)	25,000					25,000
GLC Project Administration (<i>salaries, indirect costs</i>)	40,000	40,000	40,000	40,000	40,000	200,000
Total	264,000	195,000	198,000	170,000	173,000	1,000,000
NRCS 75%	198,000	146,250	148,500	127,500	129,750	750,000
GLC 25%	66,000	48,750	49,500	42,500	43,250	250,000

It is anticipated that additional resources, both in-kind and monetary, will be provided by the GLC, state and local units of government as well as private entities for the 25% partner contribution.

Funding for edge-of-field monitoring (paired watershed approach) would be arranged between GLC, EPA, and USGS. The estimated expense for monitoring is anticipated to be \$250,000 to \$300,000; which could be included as part of the partners 25% contribution requirement.

Funding for implementation of NRCS conservation practices/systems on the demonstration farm sites will be provided through GLRI-EQIP financial assistance funding; and/or through state general EQIP financial assistance funding. To provide the funding assistance for the difference between the NRCS financial assistance payment rate for the conservation practice and the actual installation expense; the partner will need to secure funding for the estimated 25% expense.

NRCS Conservation Practice/System Installation	125,00	125,000				407,020
NRCS Payment Rate (estimated to be 75% of installation expense)	93,750	93,750				305,265
GLC (25%)	31,250	31,250				62,500

Project Tasks Narrative

Establish Advisory Board – A board will be established to provide project guidance to the GLC. It will be composed members representing interests of; NRCS, State of Wisconsin, County Government, scientific community, farmers, Tribes and commercial entities. The board will meet at least four times a year either in person or via teleconference. Correspondence by e-mail will be a major component of the methodology to exchange ideas and comments. NRCS shall have final approval authority.

Develop criteria for site selection – The selection of the sites is critical to the success of the project. They have to have specific requires among others; accessible to the public, conducive to conservation system implementation, and cooperative landusers,

Contact potential site landowners – from the list of potential sites, the landowners of those sites will be contacted and an offer will be made to them to participate for a rental fee.

Contract with landowners – A contract will be developed between the GLC and the participating landowners. The contract will specify, among other items, the activities to be conducted on the site, the site boundaries, obligations of the landowner and GLC, timeline for site activities, ingress and egress rights, the length and amount of the land rental, payment schedule, and additional language on liability and insurance.

Develop conservation systems plan for each selected site – Each site will have a plan developed that details the requirements to plan, design and implement the conservation systems to be install on the site. This will take place in conjunction with the advisory group and the site owner. Items to be taken into consideration when developing the plan include, soils, current cropping system, tillage, number of animal units, manure handling, crops grown, drainage, farmer future operational needs, and public information needs.

Develop monitoring plan for each selected site – Each site will have a plan developed that details the requirements to plan, design and implement the monitoring system to be install on the site. This will

take place in conjunction with the advisory group, entities involved with monitoring and the site owner. It will include edge of field, drainage way, subsurface and stream monitoring.

Develop and implement partner agencies collaboration strategy – Other partner agencies will be invited to participate in the demonstration site as a system implementer, monitor or outreach and provide expert service and personnel to the project.

Collect baseline data for each selected site – Each site will require an extensive inventory of the current conditions including such items as soil type and location, topography, drainage patterns, cropping history, soil nutrient levels, conservation system practices installed. This will be used to develop the site plan and assess changes.

Design conservation systems for each selected site – Once the systems have been selected, each practice will be planned and designed. For structural practices this will require engineering services. A conservation plan for each site will also be developed.

Install conservation systems for each selected site – The conservation system will be installed following the time line established in the site plan and the conservation plan. Timing of installation will also be coordinated with the outreach and monitoring plans. Private contractors will be engaged for most of the structural installation, however, the site manager and the farmer may install agronomic practices as necessary.

Develop technology transfer plan – An implementation plan will be developed to include on-site and regional technology transfer component. A regional steering committee or task force comprised of representatives from the entire Great Lakes basin may be established to guide this effort. The onsite plan will include guidelines for having public tours including types of tours and timelines, establishing and content of a website, the need for and type and location of site signage, and the development of news releases and other instructional material. The regional component of the plan will include guidelines on sharing data and lessons learned from the project, when and how to display or/and make presentation about the project at regional and national meetings, the number and timing of informational webinars, developing and sending out a project e-newsletter and other types of outreach for project activities.

Implement technology transfer activities – Over the course of the project life, the technology transfer plan will be implemented.

Maintain sites – The sites will be maintained to provide ingress and egress to authorized personnel and to the public during specific events. The site will be kept clear of debris and detritus as much as possible. Parking for the public will also be maintained at each site.